# 5560
# THYRATRON
MERCURY-VAPOR TETRODE

## DATA

**Electrical:**

| | | | |
|---|---|---|---|
| Heater, for Unipotential Cathode: | | | |
| Voltage* | 5.5□ | 5.0 | volts |
| Current | 5.0□ | 4.5 | amp |
| Direct Interelectrode Capacitance (Approx.): | | | |
| Grid No.1 to Anode | 0.2 | | μμf |
| Peak Voltage Drop(Approx.) | 16 | | volts |
| Approx. Control Characteristics: | | | |
| Anode Voltage | 100 | 1000 | volts |
| Grid-No.2 Voltage | 0 | 0 | volts |
| Grid-No.1 Voltage | +1 | -9 | volts |
| Ionization Time(Approx.) | 10 | | μseconds |
| Deionization Time(Approx.) | 1000 | | μseconds |

□ Applies only when this tube is used for ignitor firing.

**Mechanical:**

| | |
|---|---|
| Mounting Position | Vertical, Base Down |
| Overall Length | 7-11/16" ± 1/4" |
| Greatest Radius | 2-1/4" |
| Bulb | ST-23 |
| Caps | Medium |
| Base | Medium 4-Pin, Bayonet |

**Maximum Ratings, Absolute Values:**

| | | |
|---|---|---|
| PEAK FORWARD ANODE VOLTAGE | 1000 max. | volts |
| PEAK INVERSE ANODE VOLTAGE | 1000 max. | volts |
| GRID-No.1 (CONTROL-GRID) VOLTAGE: | | |
| Before Conduction | -1000 max. | volts |
| During Conduction | -10 max. | volts |
| GRID-No.2 (SHIELD-GRID) VOLTAGE: | | |
| Before Conduction | -300 max. | volts |
| During Conduction | -5 max. | volts |
| INSTANTANEOUS ANODE CURRENT: | | |
| Below 25 Cycles | 5 max. | amp |
| 25 Cycles and Higher | 30 max.□ 15 max. | amp |
| AVERAGE ANODE CURRENT** | 0.5 max.□ 2.5 max. | amp |
| SURGE ANODE CURRENT for 0.1 sec., max. | 200 max. | amp |
| INSTANTANEOUS GRID-No.1 Current | 1.0 max. | amp |
| AVERAGE GRID-No.1 CURRENT** | 0.25 max. | amp |
| INSTANTANEOUS GRID-No.2 CURRENT | 1.0 max. | amp |
| AVERAGE GRID-No.2 CURRENT** | 0.25 max. | amp |
| COND.-MERCURY TEMPERATURE RANGE▲ | 40 - 80 | °C |

* Heater voltage must be applied at least 5 minutes before anode voltage is applied.
** Averaged over any 15-second interval.
▲ Recommended condensed-mercury temperature 40°C.
□ Applies only when this tube is used for ignitor firing.

5560

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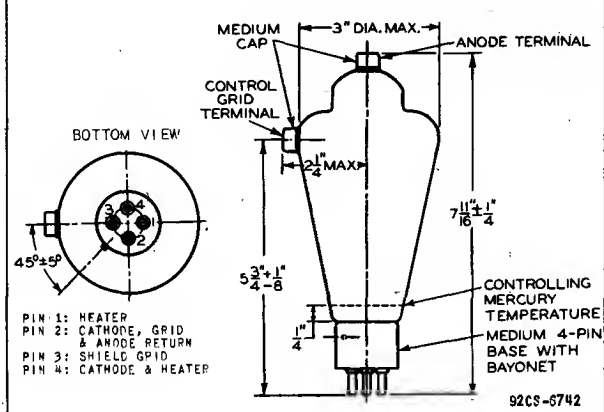


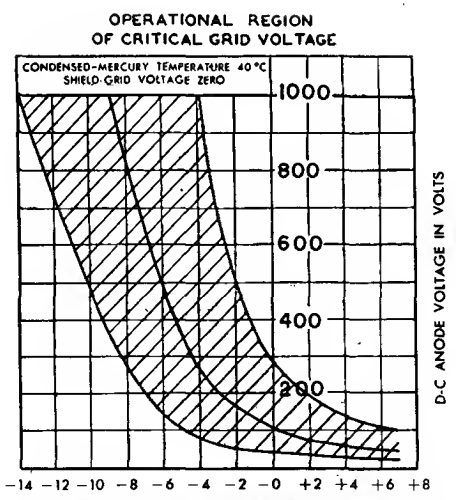

RCA

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MERCURY-VAPOR TETRODE

## DATA

### Electrical:

| | | | |
|---|---|---|---|
| Heater, for Unipotential Cathode: | | | |
| Voltage | 5.5□ | 5.0 | volts |
| Current | 5.0□ | 4.5 | amp |
| Cathode: | | | |
| Minimum Heating Time, prior to tube conduction | 5 | | minutes |
| Direct Interelectrode Capacitances (Approx.): | | | |
| Grid No.1 to Anode | 0.2 | | μμf |
| Grid No.1 to Cathode | 4.4 | | μμf ← |
| Ionization Time (Approx.) | 10 | | μsec |
| Deionization Time (Approx.) | 1000 | | μsec |
| Anode Voltage Drop (Approx.) | 16 | | volts |
| Grid-No.1 Control Ratio (Approx.) with grid-No.1 resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0 | | | 170 ← |
| Grid-No.2 Control Ratio (Approx.) with grid No.1 resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0 | | | 300 ← |

### Mechanical:

| | |
|---|---|
| Mounting Position | Vertical, Base Down |
| Overall Length | 7-11/16" ± 1/4" |
| Seated Length | 7-1/16" ± 1/4" ← |
| Greatest Radius | 2-1/4" |
| Bulb | ST-23 |
| Caps (Two) | Medium |
| Base | Medium-Shell Small 4-Pin, Bayonet |
| Basing Designation for BOTTOM VIEW | 4CD |

Pin 1 – Heater
Pin 2 – Cathode; Circuit Returns
Pin 3 – Grid No.2


Pin 4 – Heater, Cathode
Top Cap – Anode
Side Cap – Grid No.1

### Maximum Ratings, *Absolute Values*:

| | | | |
|---|---|---|---|
| PEAK ANODE VOLTAGE: | | | |
| Forward | | 1000 max. | volts |
| Inverse | | 1000 max. | volts |
| GRID-No.2 (SHIELD-GRID) VOLTAGE: | | | |
| Before Conduction | | -300 max. | volts |
| During Conduction | | -5 max. | volts |
| GRID-No.1 (CONTROL-GRID) VOLTAGE: | | | |
| Before Conduction | | -1000 max. | volts |
| During Conduction | | -10 max. | volts ← |
| CATHODE CURRENT: | | | |
| Peak | 30 max.□ | 15 max. | amp |
| Average** | 0.5 max.□ | 2.5 max. | amp |
| Fault, for 0.1 sec. maximum | | 200 max. | amp |

□ **: see next page.

← Indicates a change.

# 5560
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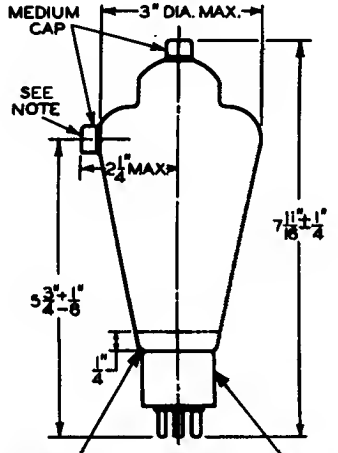
| | | |
|---|---|---|
| GRID-No. 2 CURRENT: | | |
| Average** | 0.25 max. | amp |
| GRID No. 1 CURRENT: | | |
| Average** | 0.25 max. | amp |
| COND.-MERCURY TEMPERATURE RANGE▲ | +40 to +80 | °C |
| OPERATING FREQUENCY | 150 max. | cps |

□ Applies when this tube is used for ignitor firing.
** Averaged over any interval of 15 sec. max.
▲ Recommanded oparating temperature is 40°C.

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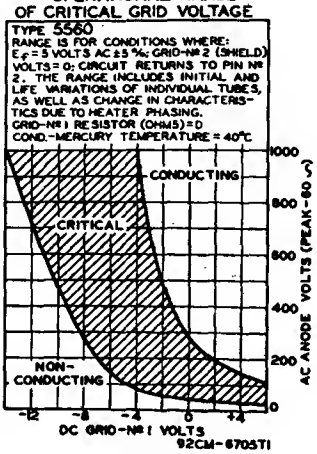
NOTE: THE PLANE THROUGH TUBE AXIS AND CENTER OF GRID-№1 CAP IS 45° ± 5° FROM THE PLANE THROUGH THE TUBE AXIS AND CENTER OF BAYONET PIN. GRID-№1 CAP IS ON SAME SIDE AS PIN №3.

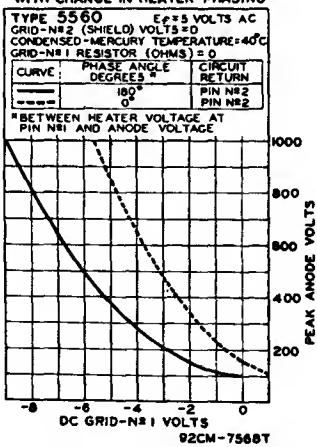
TEMPERATURE-RISE CHARACTERISTIC of the 5560 is the same as that shown for Type 5559

# 5560
# THYRATRON

## OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE




## SHIFT OF AVERAGE CONTROL CHARACTERISTIC WITH CHANGE IN HEATER PHASING



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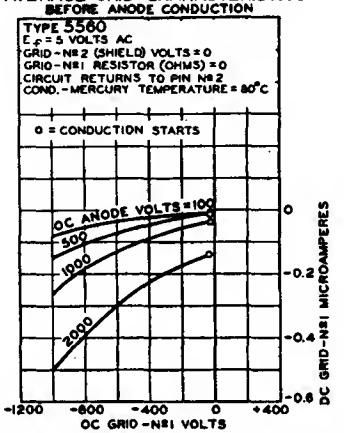
## AVERAGE GRID CHARACTERISTICS
### BEFORE ANODE CONDUCTION

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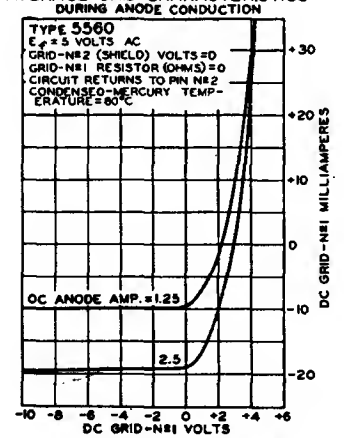
## AVERAGE GRID CHARACTERISTICS
### DURING ANODE CONDUCTION




92CM-7570T